



primelite ALE/1

High Performance Multispectral LED Light Engine

ALE/1.3 – Exposure Subsystem (365/405/435nm)

Maximum Performance and Modularity

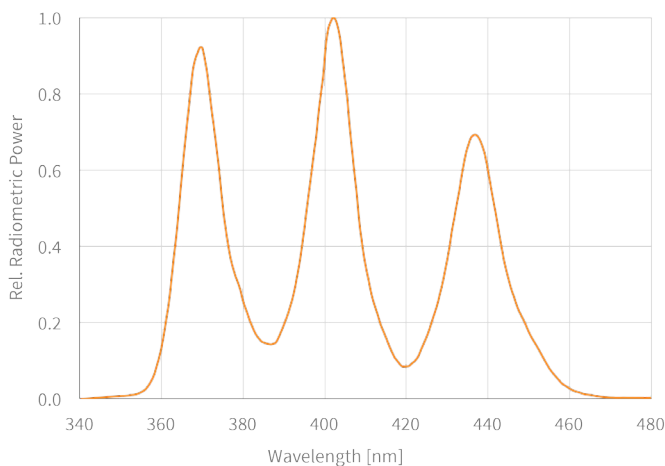
The ALE/1.3 combines radiation power and spectral characteristics of a mercury discharge lamp with the TCO and process benefits of LED technology.

Regarding the spectral composition of ALE/1 systems, there is an almost unrestricted choice: LED-Modules in the NUV, VIS, and NIR ranges are available. Exchanging LED-Modules is an easy task, which enables the end-user to adapt an ALE/1 setup to changing process requirements at any time.

The standard ALE/1.3 configuration for Semiconductor Lithography covers the i-, h-, and g-line spectrum — combining 3 high performance LED-Modules with peak wavelengths around 365, 405, and 435nm.

Being a fibre-coupled light engine, the ALE/1 is designed to facilitate system integration into your lithography process environment. Effective radiation is transmitted to the area of application using a flexible light guide.

Spectral Composition and Radiation Output



Radiation output* [in mW]	ALE/1.3		ALE/1.3+	
	Ø 5mm	Ø 6.5mm	Ø 6.5mm	Ø 8mm
Light guide				
365±15nm	4,300	5,100	7,200	8,100
405±15nm	5,300	6,200	8,900	9,900
435±15nm	4,200	4,900	7,000	7,900
Total 350-470nm	15,000	17,500	25,000	28,000

* Measured at the end of light guide (length 1.5m) / ±10% deviation possible

Highlights

- Up to 30 Watts of UV
- Customized spectral composition
- Future-proof mercury-free light source
- LED process stability and TCO benefits
- Closed loop controlled output
- Easy to integrate in new and existing setups
- No external cooling required

System Properties and Specifications

Included emitters	3
Numerical aperture	0.6 (2α 70°)
Communication interfaces	Touch display, AUX, USB, PLC, and Fieldbus (e.g., CANopen)
Heat management	Internal water cooling
Dimensions (W H D)	28cm x 23cm x 40cm (11.0" x 9.1" x 15.7")
Weight	15.0kg (33.1lbs)
Power supply input	110-240VAC / 50-60Hz / 1,000W



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